

**URA Visiting Committee for the Fermi National  
Accelerator Laboratory**

**Administrative and Operations  
Support Review – 2006**

**October 2006**

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**URA VISITING COMMITTEE  
FOR  
FERMI NATIONAL ACCELERATOR LABORATORY  
Batavia, Illinois**

**ADMINISTRATIVE AND OPERATIONS  
SUPPORT REVIEW**

**October 3 - 5, 2006**

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**URA VISITING COMMITTEE**  
**ADMINISTRATIVE AND OPERATIONS SUPPORT**  
**FERMI NATIONAL ACCELERATOR LABORATORY**

**October 3 – 5, 2006**

**INTRODUCTION**

Universities Research Association, Inc. (URA), a consortium of 90 leading research-oriented universities, has established a visiting committee charged with performing a three-day peer review of the Fermi National Accelerator Laboratory (Fermilab or the Laboratory) administrative and operations support activities.

The review was conducted from October 3- 5, 2006, at Fermilab, which is located in the western suburbs of Chicago, near Batavia, Illinois.

**PURPOSE AND SCOPE**

The purpose of the review is to seek the opinions of a diverse group of outside experts in order to review and assess the quality of and effectiveness of Fermilab's four administrative and operations support sections (Environment, Safety and Health; Facilities Engineering; Business Services; and Laboratory Services). As a result of the timing of the review, a decision was made not to review activities of the Budget Office as had been done in past years, since it was in the midst of fiscal year-end closing.

Specifically, URA charged the team to:

- Follow-up on the findings and recommendations of the results of the mid-year self-assessment.
- Solicit customer (internal, as well as the Department of Energy [DOE]) feedback.
- Evaluate each Section's ability to accomplish its mission in a cost effective and efficient manner within its present staffing level.
- Accomplish on-site inspections and operations.
- Provide feedback to improve the Laboratory's self-assessment process.
- Communicate the results of the review to management and other appropriate parties, in consultation with URA.
- Complete a written report to URA which becomes part of the self-assessment report, subsequently submitted to DOE in accordance with the prime contract.

## **BACKGROUND**

Fermilab is one of the world's leading centers for high-energy physics research, with a staff of 1,904 and a current annual budget of approximately \$325 million. The Laboratory is located 30 miles west of Chicago, and is the home of the Tevatron, the world's highest energy particle accelerator. The laboratory provides research facilities for nearly 3,000 physicists from institutions in most of the United States and many foreign countries.

The Laboratory is organizationally aligned according to mission (line) and support (staff) functions. Mission organizations (e.g., Accelerator and Particle Physics) are designated as Divisions. Operations support and administrative organizations are designated as Sections.

Fermilab annually convenes a visiting committee to review its scientific programs. During the summer of 2001, URA established a similar external review process for Fermilab's operations and administrative functions. Subsequently, a visiting committee was appointed, made up of individuals with diverse administrative and operations management backgrounds, and representing both the public and private sectors, to perform a peer review and issue a report identifying strengths and weaknesses, opportunities and improvements, and make recommendations accordingly. The first report was issued in October 2001, and similar reports have been issued on a regular basis since that time.

In addition to the URA visiting committee report, a vigorous self-assessment process has been instituted as part of the Contract Performance Measurement Process agreed to with the DOE. This self-assessment activity has been functioning for several years and has served as the initiation point for continuous improvement within the Laboratory..

The DOE's Office of Science (SC), through the Fermi Site Office (FSO) which is physically located at the laboratory, provides DOE administrative and operations support oversight. FSO is the prime interface for detailed evaluation of contract performance measures.

The contract for operation of Fermilab is currently undergoing re-competition. It is recognized that the effort to provide data for the re-competition, and, in some cases, the availability of key staff due to their involvement in the contracting process, have delayed implementation of some of the recommendations arising from the previous URA visiting committee reports. Nevertheless, the present committee was favorably impressed with absence of impact on the contract performance metrics arising from the re-competition process.

## **TEAM MEMBERS**

Team members include a diverse group of experts with functional and organizational expertise consistent with the URA charge. That includes experience within both private industry and DOE's national laboratory and M&O contracting arena in the fields of business management, human resources, ES&H, facilities management, and budget. The team also includes two

members of the Fermilab Board of Overseers, both of whom are familiar with the laboratory's mission and user communities.<sup>1</sup>

## METHODOLOGY AND APPROACH

The review process included information gathering through a variety of processes: briefings, interviews, document reviews, and observations of on-site activities. Data collection methods were qualitative in nature, and specifically included:

- **Briefings** – The visiting committee was briefed by representatives of the Directorate and Section heads, a process which was interactive and included question-and-answer segments.
- **Interviews** – Over 30 Fermilab staff members and DOE personnel were interviewed during the course of the assessment. Interviewees included a diverse range of both operations and administrative support staff, as well as their customers (representatives of the mission-related organizations who use Section services).
- **Document Reviews** – The team reviewed key laboratory documents, including most notably recent DOE and self-assessment reports and the URA annual report.

The Committee was divided into four segments for purposes of interviewing and report writing, based on team members' specific areas of expertise and organizational experience, and each was assigned a focus area: Facilities Engineering; ES&H; Business Services; and Laboratory Services. All team members participated in the identification and review of "cross-cutting" issues.<sup>2</sup>

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<sup>1</sup> "Users" are defined as those scientific researchers who come to the laboratory to use its facilities in the pursuit of particle physics experiments.

<sup>2</sup> "Cross-cutting" issues are those which affect a wide range of laboratory mission and support activities, and therefore should be addressed by the laboratory directorate. The issues are identified based on the team's experience in management and administration of similar activities in other organizational contexts.

## **FINDINGS AND OBSERVATIONS**

### **Environment, Safety, and Health (ES&H) Section**

The Committee evaluated the mid-year self assessment for Measure 5: “Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection” and each of its three sub-measures. The Committee’s evaluation of Measure 8.1: “Provide an Efficient and Effective Emergency Management System (EMS)” is also included in this section of the report due to its close alignment with the ES&H Section. The observations and recommendations on the ES&H Section and the EMS are based on a presentation to the Committee by the ES&H Section Head, interviews with Senior Safety Officers in the various Divisions and Sections of the laboratory, and interviews with Division heads, senior staff, and project managers.

### **ES&H Observations**

The Committee commends the Fermilab management for elevating the position and reporting responsibilities of the ES&H Section in the laboratory’s reorganization during the last year. This move enhances the visibility and importance of diligent attention to ES&H in every aspect of the laboratory’s operations and scientific mission.

The Committee examined the laboratory’s achievements in each of the FY2006 ES&H performance measures and noted either continuing positive trends or stability compared to previous years. As an example of stability, the FY2006 Total Recordable Case Rate has been reduced by a factor of five compared to FY1998, but has been stalled at a low, but non-zero, level since FY2003. Early in 2006, the Director convened a Panel on Injury Reduction to examine the steps that will lead the laboratory toward its ultimate goal of zero incidents. The Panel’s report, submitted to the Director in June 2006, cites 11 findings and corresponding recommendations. The recommendations emphasize more complete engagement of supervisory personnel in safety planning and oversight, the lab-wide dissemination of lessons learned, and the recognition of outstanding safety performance both informally and through formal performance evaluations. The Panel’s recommendations are in the process of being implemented (see Recommendations).

The Committee judges that the laboratory’s Annual Safety Plan is a complementary, long-term vehicle for enhancing the awareness of best safety practices in laboratory operations. Presently in its third iteration of development and implementation, the Plan is becoming more comprehensive each year due to the involvement and input from personnel at all levels. The Senior Safety Officers and their staff members in individual Divisions and Sections are contributing effectively to the Plan’s evolution with coordinated guidance from ES&H Section personnel. While workplace safety was the focus of the first-year Plan, the present Plan has broader reach. For example, the Plan now covers environmental initiatives, including improved waste mitigation and lab-wide recycling efforts, and a home safety component.

The Committee notes that the laboratory continues to provide appropriate ES&H guidance and responsiveness to the needs of remote research efforts in which Fermilab employees and users

play important roles. The Pierre Auger Observatory in Argentina and the CMS Experiment at CERN are examples. Overall, customers at all levels interviewed by the Committee applauded the active support they receive from the ES&H Section.

## **EMS Observations**

The Committee judges that the laboratory continues to maintain an excellent and well-prepared Emergency Management System. The fire department and the site security operation have preserved their effectiveness during the recent laboratory reorganization that moved their oversight from the ES&H Section to the Business Services Section. Lab-wide and operation-specific emergency drills are performed regularly and contribute to the preparedness of the Emergency Operations Center. The laboratory maintains positive working relationships with nearby municipal fire and police departments and local FBI offices. These relationships strengthen Fermilab's preparedness to handle emergencies that require off-site intervention. To be responsive to the nation's evolving security concerns, the laboratory also maintains a close relationship with the DOE-Chicago Counterintelligence Office.

## **RECOMMENDATIONS**

While commending the performance and preparedness of the ES&H Section and EM System, the Committee offers the following recommendations to strengthen effectiveness:

### **ES&H Recommendations**

*Implement all action items suggested in the report of the Director's Panel on Injury Reduction as soon as possible.* Full attention to the Panel's recommendations will help the laboratory approach its goal of zero injuries.

*Devote continued attention to subcontractor and user safety initiatives.*

*Ensure that the Annual Safety Plan is embraced uniformly in all Divisions and Sections.* When a particular Division or Section makes exemplary contributions to the evolution and implementation of the Plan, use this as a model for those exhibiting less comprehensive involvement.

*Seize opportunities for more comprehensive reporting, analyzing, and disseminating findings on near-miss injury and safety incidents.* This involves promoting greater openness in reporting and discussing near misses by both management and line personnel. Associated findings and corrective actions will help the laboratory approach its goal of zero injuries.

### **EMS Recommendations**

*Explore opportunities to schedule emergency drills that involve local police, fire departments, and other authorities to exercise response scenarios requiring outside intervention.*

*Continue to embrace and react to emerging security threats relayed to the laboratory by the DOE-Chicago Counterintelligence Office.*



## **FINDINGS AND OBSERVATIONS**

### **Facilities Engineering Support Section (FESS)**

The ability for Fermilab to successfully perform future Science & Technology programs requires that Laboratory facilities and infrastructure are maintained, upgraded and expanded as necessary to meet program requirements. DOE funds to address projects such as these have been limited. Previous reviews by predecessors of this committee have noted that alternative approaches may be available to leverage scarce General Plant Projects (GPP) and capital upgrade funding from DOE programmatic sources. The Committee was pleased to observe that laboratory management has taken significant steps to allocate GPP funds to address critical infrastructure needs and that partnership with industrial and community participants have been developed and will enable marked progress in infrastructure upgrades in the future. Tentative agreements such as the electrical feeder upgrade with the city of Batavia hold the potential for substantial improvements.

Documentation of infrastructure components and systems has been deficient in many of the older DOE facilities. Fermilab has instituted an effective approach toward locating and documenting infrastructure systems using modern GIS equipment and techniques. This will permit quick and accurate access to data for future maintenance activities and will reduce the potential for outages due to system unknowns.

Review of the maintenance performance measure (7.1) indicated that all metrics had been exceeded for the first half of the year. The DOE Whitestone Database has been populated with data significantly in excess of the goal. The target percentage for maintenance investment as established by the Office of Science was exceeded. Additionally, 100% of the capital upgrade milestones were accomplished. Coupled with these accomplishments, only minimal Tevatron run time was lost due to electrical distribution or cooling systems failures. These data, while short term in nature, demonstrate effective leadership in accomplishing major infrastructure maintenance and upgrades.

A low score in one of the sub-elements of measure 7.2 indicated that the Laboratory was not adequately planning and scheduling GPP projects, specifically that a higher percentage of GPPs should be identified and scheduled in the Ten Year Site Plan at least one year before the authorization request was submitted to the DOE. Planning of capital expenditures must be integrated tightly with the programmatic goals of Fermilab. GPP funds are the major source of DOE infrastructure upgrade funds available to the Laboratory. Hence, accurate planning for the GPP projects must be accomplished in total concert with needs of the programs. FESS must be heavily involved in development of the Ten Year Site Plan to ensure this goal is met. Understandably, one of the advantages of GPP funds is to be able to respond quickly to new, changing, or recently identified programmatic needs. However the planning process must be based on prior period infrastructure condition assessments which should yield timely planning opportunities.

Coupled with the planning process is a need for the development and application of more rigorous and quantitative risk based prioritization of infrastructure improvement projects. A system based on programmatic impacts as well as other major risk factors such as safety and compliance, and the thorough and defensible documentation of the decision process will enable the justification of capital project decisions to DOE and effective integration into the Ten Year Site Plan.

During interviews with FESS customers, a general satisfaction with services was indicated. However, there were some negative comments that the Committee deemed appropriate to evaluate. In the investigation of these instances, inadequate or unsatisfactory performance did not appear to be the issue. Rather, the Committee concluded that a major issue involved lack of communications. An improvement in FESS-customer communications would most certainly result in more positive customer opinions and probably enhance performance. There does not appear to be a formal, rigorous, methodical customer evaluation or feedback process to demonstrate that FESS is striving to excel as a service organization attempting to meet customer expectations.

## **RECOMMENDATIONS**

*FESS should develop timely, prioritized GPP plans strongly linked to the Ten Year Site Plan.*

*FESS should develop and institute a rigorous process and expectations for improved customer communications.*

## **FINDINGS AND OBSERVATIONS**

### **Business Services Section (BSS)**

The Committee reviewed Measure 6.2: Provide an efficient, effective and responsive Acquisition and Property Management System

The property function is being performed effectively and efficiently. DOE provided feedback that clearly indicated that they are pleased with Fermilab's performance in this area. Interviews with Fermilab staff also reflected satisfaction with this function.

With respect to the acquisition function, Fermilab is performing acceptably in the following three of the four Balanced Scorecard sections:

- 1) Customer Perspective: the customer's view of procurement operations at the Laboratory
- 2) Learning and Growth Perspective: employee satisfaction
- 3) Financial Perspective: costs to perform the procurement function per dollar spent

Weaknesses were found in the fourth Balanced Scorecard section which is the Internal Perspective. The Internal Perspective assures that customer requirements and expectations are understood, and that the appropriate procurement processes are in place to support customer needs. As a result of an Internal Audit review of service contracts and file reviews by DOE, the following weaknesses were identified: a) poor file documentation, b) lack of contract administration, c) appropriate clauses being omitted, and d) prevailing wage determination not incorporated into a file. DOE's FY 2006 Mid-Year Summary Appraisal Report noted these weaknesses and DOE strongly voiced their concern in feedback to the committee.

Fermilab is in the process of implementing corrective actions to address the weaknesses. These actions include a review of every service contract file, Service Contract Act training, and talking to peers at other laboratories. It is important to complete these actions and to ensure that the actions have addressed the weaknesses. Without addressing the weaknesses, Fermilab will find itself to be in an extremely weak position if it is necessary to enforce contract requirements with a non-performing subcontractor. Unless the proper clauses are in the contract, the contract has been properly administered, and the proper documentation is in hand, Fermilab will have few alternatives and those few alternatives are likely to be expensive. It is also important to address the weaknesses in order to demonstrate that Fermilab is managing its functions effectively, efficiently, and in compliance with Public Law.

In addition to the above weaknesses, feedback to the Committee from DOE indicated that they consider the Procurement Department to be understaffed. This is supported by the near perfect rating in the Financial Perspective section of the Balanced Scorecard and the weaknesses found by DOE and the Internal Audit review. In general, contract administration and file documentation are the first items to be neglected when there is a

staffing shortage. Staff training and lack of experience also can contribute to such weaknesses. As noted above, additional training is being provided and there is no indication that lack of experience is a factor. Fermilab's plan to recruit and hire two people is strongly supported by the Committee. However, it is noted that these two hires will only replace individuals who have recently retired.

The Committee also discussed ILC plans with the Fermilab Procurement Manager. It was apparent that, while there have been discussions between the programmatic staff and the Business Services Section (including Procurement), there has been little active Procurement involvement in ILC planning. The extensive programmatic and scientific effort that is being invested in the ILC will not have the needed credibility unless it is supported by a well thought out Acquisition Plan. This is a DOE expectation and it is DOE practice not to entertain a project unless there is such an Acquisition Plan. It is recognized that ILC decisions will not be made until sometime in the future and that there are many uncertainties. However, schedules and assumptions currently being made on the programmatic side of the ILC effort will not have credibility unless they are supported with credible acquisition planning.

## **RECOMMENDATIONS**

*Expediently complete corrective actions to address weaknesses in procurement file documentation, contract administration, and use of appropriate clauses. This includes ensuring that the applicable wage determination is obtained and incorporated into the file.*

*Expediently complete planned recruitment and hiring of two individuals for the Procurement Department.*

*Develop a detailed strategy to address ILC procurement needs (Acquisition Plan).*

## **Additional Recommendations**

### *Resolve Management Information System (MIS) Issues*

Three MIS issues were identified during staff discussion. They were 1) limited access to software during the year-end financial closing, 2) difficulties with software in tracking special process spares in the Accelerator Division (AD), and 3) the need for a conference management system. Addressing these relatively small issues would increase efficiency, enable staff to perform their duties more effectively, and reduce staff frustrations.

Business Service Section staff acknowledged the year-end financial closing access issue and indicated that there are possible alternatives to the current approach. As for tracking special process spares within AD, the solution was not immediately evident. It appears that the Inventory module within Oracle may not be sufficient to serve AD needs. However, the issue needs to be investigated by individuals with the appropriate expertise. If solved, it would enable both AD and Accounting office personnel to perform their function more effectively. Finally, a conference management system needs to be

implemented. This will enable personnel across Fermilab to efficiently and effectively comply with DOE conference management requirements and manage their travel plans.

### *Laboratory Telecommunications Needs an Integrated Approach*

The telecommunication function currently resides in two organizations. The Computing Division manages teleconferencing and the Business Services Section manages landline telephones, PDAs and other telecommunications items. Fermilab should examine placement of telecommunications responsibility to see if placement in one organization would result in more overall effective management. Fermilab may benefit from a single integrated and consistent approach to telecommunications.

An integrated approach may be particularly useful as new technologies continue to come on the market, landlines become less cost efficient, and Fermilab staff needs become more sophisticated. Committee interviews with staff indicated a need for additional guidance on the purchase and utilization of new technology.

### *Solve Foreign Travel Problem*

Fermilab recently hired a knowledgeable Travel Manager and has moved management of foreign travel to the Business Services Section (BSS). Fermilab should capitalize on the new office of the Travel Manager and the move to BSS by centrally managing all travel within BSS. Central management of all travel functions would offer the best opportunity for performing the function effectively and efficiently. There are many administrative personnel across the Divisions and Sections who currently have travel function responsibilities and these responsibilities account for only a small percentage of their overall job. There also are individuals at Fermilab who do not have ready access to an administrative assistant who can assist them in meeting travel and conference requirements. Foreign travel and conference requirements have become particularly complex. The number of foreign travel and conference related issues has blossomed in recent years and will continue to do so unless Fermilab utilizes a different approach.

The concept of a service representative was discussed during the Committee's interviews with the Travel Manager. In this concept, Travel Office service representatives would work directly with the traveler and complete the necessary paperwork and data entry on behalf of the traveler. This approach would significantly reduce error rates, the time needed to process paperwork, and frustration on the part of travelers and administrative staff. Further, if an automated travel approval and settlement system were implemented along with centralized travel management, efficiencies and effectiveness would be even greater.

Implementing centralized travel management will be a significant change to current operations. A change management plan is essential and the Fermilab Office of Public Affairs can be an asset in developing the communications aspect of this plan. To be successful, the plan must include consequences for travelers (both positive and negative). Compliance with the new system should not be optional.

## **FINDINGS AND OBSERVATIONS**

### **Laboratory Services Section (LSS)**

For this section, the area which the Committee was asked to evaluate from the mid-year self assessment was Measure 6.3, “Provide an efficient, effective and responsive human resources management system.” This refers to the overall compensation strategy and plan for Fermilab. The Committee also sought and evaluated feedback from DOE and customer representatives on overall service provided by the Laboratory Services Section. Additionally, the Committee evaluated the status of recommendations made in reference to the Laboratory Services Section during the 2005 Peer Review.

### **LSS Observations**

#### Compensation Strategy and Plan

Earlier in 2006, DOE completed a comprehensive evaluation of the Laboratory’s compensation plan. The final report cited eight major areas of deficiencies, which must be addressed in order to obtain the mandatory certification of the plan by DOE. Since receipt of the DOE findings, the Laboratory has undertaken and implemented corrective actions. The DOE representative reported satisfaction with the Laboratory’s response to date. The DOE further expressed the opinion that if the Laboratory continues with implementation of actions as planned, they anticipate that the required certification may be granted by year end 2007 or early 2008, which is the DOE’s expected schedule.

The Committee evaluated the major components of the recently implemented compensation system, which are market based pay ranges (tied regionally where appropriate), an updated performance review process, and a Compensation Increase Plan which is tied to market range position and performance score. These key components, as researched and developed by the Laboratory, are consistent with current best practices in competitive, market based pay plans.

Some negative feedback was received from customers relative to the new compensation strategy. The feedback was primarily about how the new plan sets firm salary increase parameters for managers making those decisions. In general, customer managers seem to understand the new compensation plan, but disagree with the basic pay strategy selected by Laboratory management.

#### Overall Services provided by Laboratory Services Section

The DOE representatives expressed their view of overall demonstrated competency and capability of the Laboratory Services Section to provide a broad range of human resource and education related services to the Laboratory, which would also meet with DOE expectations. In particular, DOE expressed confidence in the Laboratory Service Section’s ability to benchmark current best practices, think creatively, and recommend

“out-of-the-box” solutions in their service areas. These skills and capabilities will be particularly important in many of the scenarios for the future of the Laboratory – ranging from whether it becomes home of the ILC or if not, a different scientific mission than exists today.

The Committee saw evidence that the Laboratory Services Section is aware of current best practices and has a broad range of networking and benchmarking contacts in various specialty areas of human resources and education.

Positive feedback was received from customers relative to services provided by most all areas, including Employee Relations, Equal Opportunity, Recruitment, Training/OD, Benefits and Education. Specific positive feedback was received from customers concerning guidance received during employee relations situations (including external charges and lawsuits), quality of support in the hiring process, availability and quality of management training programs, the quality of day care and summer camp for children of employees. Customers also expressed pride in the quality and range of education programs provided to the community.

Customers expressed concern and frustration with the time delay in implementing new Fair Labor Standards Act (FLSA) requirements. The Committee believes that the deadline for implementation was January 1, 2005.

#### Status of Recommendations made by 2005 Visiting Committee Review

It appears that actions have been implemented following the 2005 Visiting Committee review which address the following: a relocation policy for (expatriate) scientific staff, a bargaining unit contingency plan, a short term disability plan, and continuance of benchmarking best practices. Recommended programs which have been developed, but not yet implemented, are the Diversity Council (delayed start until January 2007), succession planning, and the vacation/sick leave donation plan.

### **RECOMMENDATIONS**

*Finalize the necessary FLSA changes immediately.* Risk assessment for potential liability for back pay and fines should also be done immediately.

*Change the name of Laboratory Services Section to reflect the importance of people and education to the Laboratory.* The organizational changes recommended in 2005 for this Section were implemented earlier in 2006, and the name should reflect this.

*Organization and Human Asset Plan (OHAP) tools and processes (which will include succession planning) should be developed by Human Resources.* The Directorate should be the owner and be responsible for implementation.

*Human Resources should drive all hiring processes, including scientific, as soon as possible.* It is critical that HR centrally design and manage all hiring processes for all

employee classifications, including applicant flow and tracking, diversity recruitment, as well as salary and relocation offers.

*Proactive change management principles, especially sponsorship and communications, should be applied to every major initiative, whether in this support Section or others.*

The Directorate and responsible Section should differentiate roles and responsibilities in the change process, as appropriate, for initiatives which are primarily procedural in nature versus those which, when effective, will change longer standing cultural norms and issues in the Laboratory.



## **Cross-Cutting Issues**

During the process of reviewing the four sections covered by the Charge to the Committee, the Committee noted several cross-cutting issues that surfaced repeatedly. The resolution of these issues will be crucial in taking the Laboratory into the future and fulfilling its true potential.

### *Readiness to deliver the ILC – Ideas Out of the Box*

Laboratory management should keep the vision of locating the ILC in Illinois in the forefront of all decision-making. Each decision should be examined in the light of how it will affect locating the ILC near Fermilab. In order to convince the United States Congress and the international physics community that Fermilab should play a pivotal role in ILC development, a great deal of out-of-the-box thinking will be required. Revolutionary, new ideas should be encouraged, nurtured, and celebrated in partnership with the FSO. Support from the FSO can be instrumental in winning overall DOE/SC support for new initiatives.

### *Cultural Change – People in the Box*

Scientific freedom and curiosity has long been the watchword at Fermilab. In order to move successfully into the large project future of the ILC, there will need to be some culture change. Staff will need to use all their energies to be the best at their assigned responsibilities. Too much time and energy is currently being spent duplicating the efforts of others. Future success will not allow competing administrative efforts. Save the competition for scientific endeavors that advance the ILC.

### *Leadership – Hold the Course*

In order to move into a new paradigm such as the ILC, Laboratory management will constantly need to be re-evaluating systems, policies and procedures and making decisions accordingly. Change is inevitable. Once a decision is made, it should stay in effect until there is clear evidence that it has succeeded or failed. Staff should not be able to overturn major decisions made by Laboratory management just because they don't agree with the decision or it is not "how we have always done things".

### *Service – A Way of Life*

The Administrative sections in any organization are there to service the mission. In the case of Fermilab, the mission is science. The more that attention is paid to service to internal and external customers, the smoother will be the transformation of the organization from the current Tevatron-based science to the ILC. Customer service representatives, service level agreements, and customer satisfaction interviews with follow through are all tools that can be used to make service a way of life at Fermilab. In addition there should be formal communications plans for progress reporting to internal customers.

## CONCLUSION

The Committee found Fermilab to be well-managed by dedicated staff, however there is always room for improvement. The Committee has presented in this report numerous actions that it recommends that Laboratory management undertake. The three that the Committee considers of highest priority are:

*Finalize the necessary FLSA changes immediately.*

There are legal and financial penalties that may be imposed for failure to complete this action in a timely manner.

*Complete corrective actions to address weaknesses in procurement file documentation, contract administration, and use of appropriate clauses.*

Legal issues can arise when contract documentation is not accurate.

*Solve the Foreign Travel Problem*

Solving this pernicious problem would go a long way toward diffusing an irritant that has dragged on too long and daily takes time and attention away from the mission.